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Editorial.—M. D'ARBAUMONT has begun the publication of an elaborate paper on the anatomy of "The Stem of the Ampelidæ."

TRIMEN'S JOURNAL for October records the death of Frederick Currey, for 20 years secretary of the Linnean Society.

WE BROUGHT Dr. Gray home sooner than he intended. He sails from England on October 26, arriving here probably about the 4th or 5th of November.

DR. J. SCHNECK has found *Artemisia annua* growing plentifully in Daviess county, Ind., and says that it was the greenest weed to be seen at the end of the nine weeks drought.

MR. C. G. PRINGLE has spent the past summer in the west. He has collected many good things in Arizona, near Tucson, and is now in Oregon. Such a collector will bring in much new material.

MR. J. A. SANFORD, of Toledo, Ohio, is preparing a catalogue of Lucas County plants. Such a county should yield richly, as it lies along the lake and contains the swampy mouth of the Maumee River.

MR. THOS. MEEHAN has been observing *Talinum teretifolium* and finds that its flowers always open regularly at 1 p. m.; though for one season they closed promptly at two and the next at any time between two and five.

THE YORKSHIRE NATURALISTS' UNION has what are called "Fungus Forays," to which all mycologists are cordially invited. Why not have "Lichen Liftings," "Moss Meanderings," "Fern Frolics," and "Exogenous Excursions?"

PROF. W. J. BEAL has 200 different grasses and clovers growing, each in a separate bed, in the garden attached to the Michigan Agricultural College. It has taken several years to make the collection, which is being added to yearly.

SIR JOHN LUBBOCK in observing the seeds of *Stipa pennata* has discovered that they take advantage of the action of the wind, and are thus buried by the corkscrew-like movement of the twisted awn. In his observations apparently the question of hydroscopic action was eliminated.

PROF. F. L. HARVEY, in the last GAZETTE, p. 273, was made to say that *Quercus Michauxii* in Arkansas attained the prodigious size of 19 feet in diameter. He asks us to change the word "diameter" to "circumference," so that the statement may sound more within the bounds of reason.

DR. H. F. HANCE, in the October number of Trimen's Journal, describes a new genus of *Taccaceæ*, which he calls *Schizocapsa*. The only other genera of the order are *Tacca* and *Ataccia* which the author is inclined to retain as entitled to rank as separate genera. The new genus comes from China.

AS WE GO TO PRESS we learn with great regret of the death of Dr. A. P. Garber, whose name is so familiar in connection with the plants of Florida. In the next GAZETTE may be expected a short memoir written by Prof. T. C. Porter, who probably knew him better than any other of his associates.

ACCORDING TO DR. FARLOW, DeBary is not willing to go as far as Sachs in giving up the general distinction of algæ and fungi, although recognizing their close relationship. This whole thing of the classification of Cryptogams is enveloped in a blinding mist, and no man knows when it will clear away.

M. J. VESQUE, in the current number of Ann. Sci. Nat., describes and figures some "New Elements in the Liber of Acanthaceæ." They are needle-shaped bodies, occurring in great numbers in certain cells of the liber, and at first glance would be called raphides; but the proper reagents show them to consist of cellulose incompletely lignified. As many as a score of these cellulose needles are contained in large cells which are ordinarily pointed at both ends.

SIR JOSEPH HOOKER, in his recent address before the Geographical section of the British Association, said that Humboldt was the founder of the science of geographical distribution, Forbes its reformer, and Darwin its latest and greatest law-giver. The first naturalist to investigate as a botanist the laws of distribution from a paleontological standpoint was Dr. Asa Gray and the brilliant results are well known to us in that wonderful chapter upon the relation of our own flora to fossils found in Arctic regions.

MR. THISELTON DYER has propounded the latest theoretical application of the laws of geographical distribution, which Sir Joseph Hooker states as follows: The floras of all the countries of the globe may be traced back at some time of their history to the northern hemisphere, and they may be regarded in point of affinity and specialization as the natural results of the conditions to which they must have been subjected during recent geological times, on continents and islands with the configuration of those of our globe.

M. P. SAGOT, in the last number of Annales des Sciences Naturelles, begins a catalogue of the phænogamous and vascular cryptogamous plants of French Guyana, the country with the peppery capital. Of course the names are for the most part unfamiliar, and families of no importance with us make grand displays in this tropical colony. For instance, the very first family mentioned is the *Anonacæ*. The six species belonging to the whole of North America are replaced by 33 species in this little patch of South America, containing but 25,000 square miles.

PROF. W. J. BEAL has been writing about "Indian Corn." His

paper is of interest to every one and shows with what care the author works in the collection of facts, not only from others, but from his own experiments. He says that corn is a variable and plastic plant and exceedingly sensitive to good or bad treatment, and hence much can yet be done to improve it. Among many other interesting statistics we note some relating to the size of corn stalks. The tallest the author had seen was $14\frac{1}{2}$ feet high, being raised in Michigan from Missouri seed. The largest on record was raised in Eastern Tennessee and measured $22\frac{1}{4}$ feet. A field of such corn would look like a car: e brake.

MR. A. W. BENNETT has been observing the constancy of insects in visiting flowers, which becomes an important question in the matter of cross-fertilization. His results show a constancy that was hoped for, and bees and butterflies are quite constant enough in their attentions to single species to secure all that is claimed in cross-fertilization. It seems that insects are not entirely guided by color in their discrimination of species, for in patches of white and purple foxgloves the bumblebees would enter the flowers regardless of color, though to find a succession of foxgloves they had to fly considerable distances over other flowers. The hive bee proved to be the most constant visitor, and probably the most efficient agent of cross fertilization.

FRITZ MUELLER, in a recent letter to Mr Chas. Darwin, written from Sta. Catharina in Brazil, says: "We have had last week some rather cold nights (2° to 3° C. at sunrise), and these have given me a new confirmation of your view on the meaning of the nyctitropic movements of plants. Near my house there are some Pandanus trees, about a dozen years old; the youngest terminal leaves stand upright, whereas the older ones are bent down so as to expose their upper surfaces to the sky. These young leaves, though of course the most tender, are still as fresh and green as before; on the contrary, the older ones have suffered from the cold, and have become quite yellowish. Again, the leaves of *Oxalis sepium* were observed by me to sleep in a very imperfect manner during the summer, even after the most sunny days; but now, in winter, every leaflet hangs down in a perpendicular position during the whole night." Whereupon Mr. Darwin remarks that it is a new fact to him that leaves should sleep in a more or less perfect manner at different seasons of the year. In regard to the Pandanus leaves, Mr. Darwin's view is that some leaves place themselves at night in a vertical position in order to escape being chilled and injured by radiation into the open sky.

THE TIME IS AT HAND for the renewal of subscriptions and the GAZETTE presents its claims among other botanical periodicals. In order to see its usefulness one has only to look over the index to Vols. V and VI, ready to be issued with the December number. In it will be found references to the descriptions of nearly 100 new species, over 40 of which are phænogamous, and two of these trees. Besides these there are many articles upon the physiology and histology of plants, some of them illustrated, and all of them useful. During the past year the Catalogue of the Flora of Indiana has been pushed

through to successful completion and is now in the hands of every subscriber to the GAZETTE. The list of contributors will at once be recognized as containing the leading botanists of this country. The circulation, although far from being what it should be, is constantly increasing, and subscriptions from all the colleges and laboratories of this country, and all the large herbaria and laboratories of Europe, assure contributors of the extensive publication of their articles.

Old subscribers have sometimes been slow in renewing their subscriptions and the first few months of a new year have generally been burdened by the mailing of back numbers. We wish it plainly understood that no number will be sent without orders, as it is not our policy to continue subscriptions and then collect.

We have a confidence then that our friends will not only renew their own subscriptions, but will secure us many new ones for Vol. VII. We will be glad to mail a specimen number to any one likely to become a subscriber and we hope that our friends will send us the names of many such. Six years of constantly increasing success should so establish us in the confidence of the botanists of this country that they should give a liberal support. We ask this, not as a matter of charity, but as returning at least an equivalent for the very moderate subscription.

A new American Cynaroid Composite, by Daniel C. Eaton.—*SAUSSUREA AMERICANA*, n. sp.—Sparingly arachnoid pubescent, at length nearly smooth: stems two to three feet high. leafy: leaves 3 to 5 inches long, thin, broadly triangular-lanceolate, abruptly narrowed to a very short winged petiole, the lower ones sharply and coarsely toothed, the upper ones less toothed and gradually more truly lanceolate; heads 5 to 20 in a terminal corymb; involucre cylindrical-bell-shaped, 6 to 8 lines long, scales appressed, unarmed, webby-pubescent, the margins dark-colored; receptacle flat, naked; flowers about 15 in a head, one half longer than the involucre; achenia smooth; pappus exceeding the tube of the corolla, the inner bristles densely plumose, the outer gradually shorter and less plumose or merely scabrous; anther-tails ending in a fringe of slender hairs.

Mountains of Union Co., Oregon (7000 ft. elev.), W. C. Cusick, 1877. Cincoe Mts., Washington Terr. T. J. Howell, Sept., 1880.

This fine species of *Saussurea* has at first sight something the look of a *Vernonia*, but the plumose pappus will at once distinguish it. *S. alpina*, of Northern Europe and Asia, occurs in British America, but is much lower than this species, is more tomentose, and has the leaves less toothed, longer petioled, and none of them so clearly triangular. *S. grandifolia*, Max., from the Amoor country, has a tall stem and triangular leaves, but it has also a densely chaffy receptacle, and belongs to a different section of the genus. Since the present is the only known exclusively American species of the genus, which is chiefly North Asiatic, the name here chosen is not inappropriate.—*New Haven, Sept. 30, 1881.*